

What is claimed is:

1. A process for producing a purified aqueous hydrogen peroxide solution, comprising passing a charged aqueous hydrogen peroxide solution containing  
5 impurities through a purifier tower packed with an ion exchange resin, a chelate resin or an adsorption resin to thereby purify the charged aqueous hydrogen peroxide solution,

wherein there are provided a feed pump of given  
10 output capable of causing the charged aqueous hydrogen peroxide solution to flow to the purifier tower and further a flow sensor capable of sensing a flow rate of charged aqueous hydrogen peroxide solution being fed to the purifier tower and wherein the output of the feed  
15 pump is controlled in cooperation with the flow sensor so as to bring the charged aqueous hydrogen peroxide solution into contact with the ion exchange resin, chelate resin or adsorption resin while maintaining the flow of charged aqueous hydrogen peroxide solution at a  
20 constant rate.

2. The process as claimed in claim 1, wherein the output of the feed pump for the charged aqueous hydrogen peroxide solution is controlled by means of an  
25 inverter.

3. The process as claimed in claim 1, wherein the flow rate of charged aqueous hydrogen peroxide solution is 5 to 40 hr<sup>-1</sup> in terms of space velocity.

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4. The process as claimed in claim 1, wherein the flow rate of charged aqueous hydrogen peroxide solution is controlled so that its variation falls within the range of  $\pm 2.5\%$ .

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5. The process as claimed in claim 1, wherein any part brought into contact with the aqueous hydrogen peroxide solution is composed of a fluororesin.

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6. An apparatus for producing a purified aqueous hydrogen peroxide solution, comprising at least one purifier tower packed with an ion exchange resin, a chelate resin or an adsorption resin, through which a charged aqueous hydrogen peroxide solution containing impurities is passed so as to effect contact thereof with the ion exchange resin, chelate resin or adsorption resin, thereby purifying the charged aqueous hydrogen peroxide solution,

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which apparatus further comprises:

a feed pump of given output capable of causing the charged aqueous hydrogen peroxide solution to flow to the purifier tower,

a flow sensor capable of sensing a flow rate of charged aqueous hydrogen peroxide solution being fed to the purifier tower by means of the feed pump, and

a flow control unit capable of controlling the output of the feed pump on the basis of a detection result of the flow sensor so as to maintain the flow of charged aqueous hydrogen peroxide solution being fed to the purifier tower at a constant rate.

7. The apparatus as claimed in claim 6, wherein the flow control unit is an inverter control unit capable of controlling the output of the feed pump for the charged aqueous hydrogen peroxide solution by means of an inverter.

8. The apparatus as claimed in claim 6, wherein the flow control unit is one capable of controlling the flow rate of charged aqueous hydrogen peroxide solution being fed to the purifier tower so as to be in the range of 5 to 40  $\text{hr}^{-1}$  in terms of space velocity.

9. The apparatus as claimed in claim 6, wherein the flow control unit is one capable of controlling the flow rate of charged aqueous hydrogen peroxide solution being fed to the purifier tower so that its variation  
5 falls within the range of  $\pm 2.5\%$ .

10. The apparatus as claimed in claim 6, wherein any part brought into contact with the aqueous hydrogen peroxide solution is composed of a fluororesin.

11. The apparatus as claimed in claim 6, which further comprises a level sensor capable of detecting a water level in the purifier tower and a level control unit capable of maintaining the water of the purifier  
15 tower at a constant level on the basis of a detection result of the level sensor.

12. The apparatus as claimed in claim 6, which further comprises a pressure sensor capable of  
20 detecting an internal pressure of the purifier tower and a pressure control unit capable of maintaining an internal part of the purifier tower at a constant pressure on the basis of a detection result of the pressure sensor.

13. The apparatus as claimed in claim 12,  
wherein the pressure control unit is one capable of  
effecting such a control as to carry out not only  
stopping of the feed pump but also feeding of cooling  
5 water into the purifier tower on the basis of a  
detection result of the pressure sensor.

14. The apparatus as claimed in claim 6, which  
further comprises a temperature sensor capable of  
10 detecting an internal temperature of the purifier tower  
and a temperature control unit capable of maintaining  
an internal part of the purifier tower at a constant  
temperature on the basis of a detection result of the  
temperature sensor.

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15. The apparatus as claimed in claim 14,  
wherein the temperature control unit is one capable of  
effecting such a control as to carry out not only  
stopping of the feed pump but also feeding of cooling  
20 water into the purifier tower on the basis of a  
detection result of the temperature sensor.

16. The apparatus as claimed in claim 6, which  
further comprises a strainer arranged at a bottom part  
25 of the purifier tower, said strainer comprising a

filter and, disposed thereunder, a flange member having at its center a liquid drawoff port and having open grooves disposed substantially in the form of concentric circles, said open grooves communicating  
5 with the liquid drawoff port.

17. The apparatus as claimed in claim 6, wherein a plurality of purifier towers are connected to each other in series.  
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18. The apparatus as claimed in claim 6, wherein a plurality of purifier towers are connected to each other in series, and the flow sensor and the flow control unit are arranged at a line for feeding the  
15 charged aqueous hydrogen peroxide solution to the first purifier tower.

19. The process as claimed in claim 2, wherein the flow rate of charged aqueous hydrogen peroxide  
20 solution is 5 to 40 hr<sup>-1</sup> in terms of space velocity.

20. The process as claimed in claim 2, wherein the flow rate of charged aqueous hydrogen peroxide solution is controlled so that its variation falls  
25 within the range of  $\pm 2.5\%$ .

21. The process as claimed in claim 3, wherein  
the flow rate of charged aqueous hydrogen peroxide  
solution is controlled so that its variation falls  
5 within the range of  $\pm 2.5\%$ .

22. The process as claimed in claim 2, wherein  
any part brought into contact with the aqueous hydrogen  
peroxide solution is composed of a fluororesin.  
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23. The process as claimed in claim 19, wherein  
any part brought into contact with the aqueous hydrogen  
peroxide solution is composed of a fluororesin.

24. The process as claimed in claim 21, wherein  
any part brought into contact with the aqueous hydrogen  
peroxide solution is composed of a fluororesin.  
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25. The apparatus as claimed in claim 7, wherein  
20 the flow control unit is one capable of controlling the  
flow rate of charged aqueous hydrogen peroxide solution  
being fed to the purifier tower so as to be in the  
range of 5 to 40  $\text{hr}^{-1}$  in terms of space velocity.

26. The apparatus as claimed in claim 7, wherein the flow control unit is one capable of controlling the flow rate of charged aqueous hydrogen peroxide solution being fed to the purifier tower so that its variation  
5 falls within the range of  $\pm 2.5\%$ .

27. The apparatus as claimed in claim 8, wherein the flow control unit is one capable of controlling the flow rate of charged aqueous hydrogen peroxide solution  
10 being fed to the purifier tower so that its variation falls within the range of  $\pm 2.5\%$ .

28. The apparatus as claimed in claim 25, wherein any part brought into contact with the aqueous hydrogen  
15 peroxide solution is composed of a fluororesin.

29. The apparatus as claimed in claim 27, wherein any part brought into contact with the aqueous hydrogen peroxide solution is composed of a fluororesin.  
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30. The apparatus as claimed in claim 28, which further comprises a level sensor capable of detecting a water level in the purifier tower and a level control unit capable of maintaining the water of the purifier



tower at a constant level on the basis of a detection result of the level sensor.

31. The apparatus as claimed in claim 29, which  
5 further comprises a level sensor capable of detecting a water level in the purifier tower and a level control unit capable of maintaining the water of the purifier tower at a constant level on the basis of a detection result of the level sensor.

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32. The apparatus as claimed in claim 30, which  
further comprises a pressure sensor capable of  
detecting an internal pressure of the purifier tower  
and a pressure control unit capable of maintaining an  
15 internal part of the purifier tower at a constant pressure on the basis of a detection result of the pressure sensor.

33. The apparatus as claimed in claim 31, which  
20 further comprises a pressure sensor capable of detecting an internal pressure of the purifier tower and a pressure control unit capable of maintaining an internal part of the purifier tower at a constant pressure on the basis of a detection result of the  
25 pressure sensor.

34. The apparatus as claimed in claim 13, which further comprises a temperature sensor capable of detecting an internal temperature of the purifier tower  
5 and a temperature control unit capable of maintaining an internal part of the purifier tower at a constant temperature on the basis of a detection result of the temperature sensor.

10 35. The apparatus as claimed in claim 15, which further comprises a strainer arranged at a bottom part of the purifier tower, said strainer comprising a filter and, disposed thereunder, a flange member having at its center a liquid drawoff port and having open  
15 grooves disposed substantially in the form of concentric circles, said open grooves communicating with the liquid drawoff port.

36. The apparatus as claimed in claim 16,  
20 wherein a plurality of purifier towers are connected to each other in series.

37. The apparatus as claimed in claim 17,  
wherein a plurality of purifier towers are connected to  
25 each other in series, and the flow sensor and the flow

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